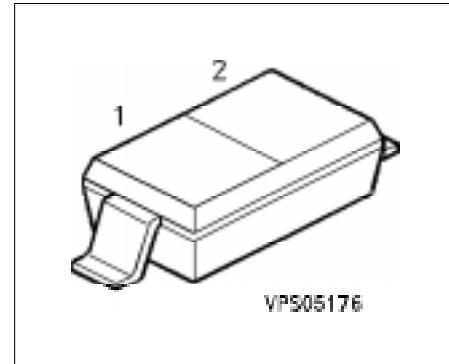


Silicon Variable Capacitance Diode

BB 639

- For tuning of extended frequency bands in VHF TV/VTR tuners



Type	Ordering Code (tape and reel)	Pin Configuration		Marking	Package
		1	2		
BB 639	Q62702-B586	C	A	yellow S	SOD-323

Maximum Ratings

Parameter	Symbol	Values	Unit
Reverse voltage	V_R	30	V
Reverse voltage ($R \geq 5 \text{ k}\Omega$)	V_{RM}	35	V
Forward current	I_F	20	mA
Operating temperature range	T_{op}	- 55 ... + 150	°C
Storage temperature range	T_{stg}	- 55 ... + 150	°C

Thermal Resistance

Junction-ambient	R_{thJA}	≤ 450	K/W
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Electrical Characteristicsat $T_A = 25^\circ\text{C}$, unless otherwise specified.

Parameter	Symbol	Value			Unit
		min.	typ.	max.	

DC Characteristics

Reverse current $V_R = 30 \text{ V}$ $V_R = 30 \text{ V}, T_A = 85^\circ\text{C}$	I_R	— —	— —	10 200	nA
Diode capacitance $V_R = 1 \text{ V}, f = 1 \text{ MHz}$ $V_R = 28 \text{ V}, f = 1 \text{ MHz}$	C_T	36 2.4	38.3 2.6	42 2.9	pF
Capacitance ratio $V_R = 1 \text{ V}, 28 \text{ V}, f = 1 \text{ MHz}$	C_{T1}/C_{T28}	13.5	14.7	—	—
Capacitance matching $V_R = 1 \text{ V} \dots 28 \text{ V}, f = 1 \text{ MHz}$	$\Delta C_T/C_T$	—	—	2.5	%
Series resistance $C_T = 12 \text{ pF}, f = 100 \text{ MHz}$	r_s	—	0.65	—	Ω
Series inductance	L_s	—	2	—	nH

Diode capacitance $C_T = f(V_R)$

$f = 1 \text{ MHz}$

